

areas of a wearer's body that are prone to faster heat loss by the production of perspiration and/or heat. Such areas of a wearer's body may comprise, for example, the chest region, thighs, armpits, upper back, and the like. Therefore, garments using the vented-insulation panels may have the vented-insulation panels localized to maximize the retention of heat while still allowing for moisture venting. The vented-insulation panels may also be located based on the comfort of the wearer when, for example, exercising.

In a Third Realization in Accordance with Aspects Herein:

[0009] The technology described herein allows moisture and/or heat to escape from a garment comprising, for example, at least a first continuous garment layer with one or more vented-insulation sections on the first continuous garment layer at predetermined locations configured to align with areas of a wearer's body that are prone to produce more perspiration, or in the alternative, areas of the wearer's body that are prone to release more heat, thereby providing thermal insulation to these areas, without the added bulk of a conventional, full coverage thermally insulating garment. The vented-insulation sections comprising a plurality of openings formed on one or more seams joining, for instance, exterior and interior layers of the vented-insulation sections, each opening in the plurality of openings extending through the exterior and the interior layers of the vented-insulation sections. Therefore, garments using the vented-insulation sections may maximize the retention of heat and comfort for a wearer, while still allowing for moisture venting.

In a Fourth Realization in Accordance with Aspects Herein:

[0010] The technology described herein allows moisture and/or heat to escape from the garment through a passage formed between, for instance, exterior and interior garment panels. In exemplary aspects, the interior garment panel may comprise an interior opening to the passage, and the exterior garment panel, which may be an insulated garment panel, may comprise an exterior opening from the passage. Each passage may have multiple interior openings and exterior openings. And each garment may have multiple passages. The technology described herein offsets the interior openings from the exterior openings to provide an indirect passage for moisture vapor and/or air to exit the garment. In other words, the offset openings cause the moisture vapor to traverse the passage when exiting the garment instead of passing directly through the interior opening to the exterior opening. Moreover, the offset openings also cause heat produced by the body to traverse the passage prior to exiting the garment thereby preventing rapid heat loss. Thus, an object of the technology described herein is to facilitate moisture transport out of the garment while maintaining an appropriate amount of heat loss.

[0011] Additional objects, advantages, and novel features will be set forth in part in the description which follows, and in part will become apparent to those skilled in the art upon examination of the following, or may be learned by practice of the technology described herein.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING

[0012] The technology described herein is described in detail below with reference to the attached drawing figures, wherein:

[0013] FIGS. 1A and 1B are a front and back view of an exemplary vented garment in accordance with the technology described herein;

[0014] FIG. 2 is a close-up view of a venting seam from the vented garment in FIG. 1;

[0015] FIG. 3A is a close-up view of a section of an exemplary aspect of the vented garment in FIG. 1 in accordance with the technology described herein;

[0016] FIG. 3B is a close-up view of a section of an alternative exemplary aspect of the vented garment in FIG. 1 in accordance with the technology described herein;

[0017] FIG. 4 is a view of a different exemplary vented garment in accordance with the technology described herein;

[0018] FIG. 5 is a close up view of a venting seam with stitches from the vented garment in FIG. 4 in accordance with the technology described herein;

[0019] FIG. 6 is a close-up view of a section of the venting seam from the garment of FIG. 4 in accordance with the technology described herein;

[0020] FIG. 7 is a cross-sectional view of a small section of the seam area in FIG. 6, where the insulating chambers are shown in relation to the openings in the seams in accordance with the technology described herein;

[0021] FIG. 8 is an additional exemplary vented garment that comprises a mesh back section in accordance with the technology described herein;

[0022] FIG. 9 is a view of an additional exemplary vented garment with vented-insulation sections in accordance with the technology described herein;

[0023] FIG. 10A is a cross-sectional view of the a vented-insulation section in FIG. 9 in accordance with the technology described herein;

[0024] FIG. 10B is an exploded view of the cross-sectional view of the vented-insulation section in FIG. 10A in accordance with the technology described herein;

[0025] FIG. 11 is a view of vented pants with vented-insulation sections in accordance with the technology described herein;

[0026] FIG. 12 is a front view of a vented top with vented-insulation sections in accordance with the technology described herein;

[0027] FIG. 13 is a back view of a vented top with vented-insulation sections in accordance with the technology described herein;

[0028] FIG. 14 is a perspective view of vented pants with vented-insulation sections in accordance with the technology described herein;

[0029] FIG. 15 is a perspective view of vented pants with vented-insulation sections in accordance with the technology described herein;

[0030] FIG. 16 is a front view of a vented top with vented-insulation sections in accordance with the technology described herein;

[0031] FIG. 17 is a back view of a vented top with vented-insulation sections in accordance with the technology described herein;

[0032] FIG. 18 is a front view of a vented top with vented-insulation sections in accordance with the technology described herein;

[0033] FIG. 19 is a back view of a vented top with vented-insulation sections in accordance with the technology described herein;

[0034] FIG. 20 is a front view of a vented fleece top with vented-insulation sections in accordance with the technology described herein;